

09/509482

422 Rec'd PCT/PTO 29 MAR 2000

SEQUENCE LISTING

<110> Crofts, Linda A  
Hancock, Manuella S  
Morrison, Nigel A  
Eisman, John A

<120> Isoforms of the Human Vitamin D Receptor

<130> 1871-130

<140>  
<141>

<150> AU/PO9500  
<151> 1997-09-29

<150> PCT/AU98/00817  
<151> 1998-09-29

<160> 14

<170> PatentIn Ver. 2.1

<210> 1  
<211> 96  
<212> DNA  
<213> Homo sapiens

<400> 1  
gttccttct tctgtcgaaa cgccttgca tggagtggag gaataagaaa aggagcgatt 60  
ggctgtcgat ggtgctcaga actgctggag tggaggaagc ctgggtct gaagtgtctg 96

<210> 2  
<211> 1463  
<212> DNA  
<213> Homo sapiens

<400> 2  
gttccttct tctgtcgaaa cgccttgca tggagtggag gaataagaaa aggagcgatt 60  
ggctgtcgat ggtgctcaga actgctggag tggaggaagc ctgggtct gaagtgtctg 120  
tgagacctca cagaagagca cccctggct ccacttaccc gccccctgct cttcaggaa 180  
tggaggcaat ggcggccagc acttccctgc ctgaccctgg agactttgac cggAACGTGc 240  
cccggatctg tgggtgtgt ggagaccggag ccactggctt tcacttcaat gctatgacct 300  
gtgaaggctg caaaggctt ttcaggcgaa gcatgaagcg gaaggcacta ttccacctgcc 360  
ccttcaacgg ggactgcccgc atcaccaagg acaaccgacg ccactgccag gcctgcccggc 420  
tcaaaccgtg tgtggacatc ggcattatcaggatcat tctgacatc gaggaagtgc 480  
agaggaagcg ggagatgtc ctgaaggcgaa aggaggagga ggccttgaag gacagtctgc 540  
ggcccaagct gtctgggg cagcagcgca tcattggccat actgctggac gcccaccata 600  
agacctacga ccccacctac tccacttccat gccaaggctcg gcctccaggat cgtgtaaatg 660  
atggggagg gaggccatc tccaggccca actccagaca cactcccgat ttctctgggg 720  
actcctcctc ctcctgctca gatcacttgc tccatcttc agacatgtc gactcgatc 780  
gcttctccaa tctggatctg agtgaagaag attcagatgc cccttctgtg accctagacg 840  
tgtcccaatcttccatgctg ccccacctgg ctgacctggat cagttacatc atccaaaagg 900  
tcattggct tgctaaatgc ataccaggat tcagagacatc cacctctgatc gaccagatcg 960  
tactgctgaa gtcaagtgc attgaggatc tcatgttgcg ctccaaatgc tccttcacca 1020  
tggacgacat gtcctggacc tggcaacc aagactacaa gtaccgcgtc agtgcgtga 1080  
ccaaaggccgg acacagcctg gagctgattt agccctcat caagttccag gtgggactgta 1140  
agaagctgaa cttgcatgag gaggagcatg tcctgctcat ggcacatcgc atcgtctccc 1200  
cagatcgatc tgggtgcag gacgcccgcg tggatggc catccaggac cgcctgtcca 1260  
acacactgca gacgtacatc cgctgcccgc acccgcccccc gggcagccac ctgctctatg 1320

ccaagatgat ccagaagcta gccgacctgc gcaaccaa tgaggagcac tccaaggact 1380  
accgctgcct ctcccttccag cctgagtgc gcatgaagct aacgcccctt gtgctcgaag 1440  
tgttggcaa tgagatctcc tga 1463

<210> 3  
<211> 1382  
<212> DNA  
<213> Homo sapiens

<400> 3  
gttccttct tctgtcgaaa cgccattggca tggagtggag gaataagaaa aggagcgatt 60  
ggctgtcgat ggtgctcaga actgctggag tggagggat ggaggcaatg gcggccagca 120  
cttccctgcc tgaccctgga gactttgacc ggaacgtgcc ccggatctgt ggggtgtgt 180  
gagaccgagc cactggctt cacttcaatg ctatgacactg tgaaggctgc aaaggcttct 240  
tcaggcgaag catgaagcgg aaggcactat tcacccgtcc cttcaacggg gactgcccga 300  
tcaccaagaa caaccgcgc cactgcccgg cctgcccgtt caaacgtgt gtggacatcg 360  
gcatgtgatgg gtagttcatt ctgacagatg aggaagtgc gagaagcgg gagatgtcc 420  
tgaaggcggaa ggaggaggag gccttggagg acatgtcgcc gccaagctg tctgaggagc 480  
agcagcgcatt cattgcataa ctgctggacg cccaccataa gacactacg cccacctact 540  
ccgacttctg ccaggccgg cctccaggcc gtgtgaatga tggtgagggg agccatcctt 600  
ccaggcccaa ctccagacac actcccaatg tctctggggat ctcctccctc tcctgctcag 660  
atcaactgttat cacctttca gacatgtgg actcgccatg cttctccaaat ctggatctga 720  
gtgaagaaga ttcaatgtac ccttctgtga cccttagagct gtcccaagtc tccatgtc 780  
cccacctggc tgaccctggc agttacagca tccaaaaggt cattggctt gctaagatga 840  
taccaggatt cagagacctc acctctgggg accagatctgt actgctgaag tcaagtgc 900  
ttgagggtcat catgttgcgc tccaatgttgc cttcaccatg ggacgacatg tcctggac 960  
gtggcaaccca agactacaag taccgcgtca gtgacgtgac caaagccgg aacagcctgg 1020  
agctgattga gcccctcatc aagttccagg tggactgtaa gaagctgaac ttgcatgagg 1080  
aggagcatgt cctgctcatg gccatctgc tcgtctcccc agatcgctt ggggtgcagg 1140  
acgcccgcgt gattggggcc atccaggacc gcctgtccaa cacactgcg acgtacatcc 1200  
gtgccgcaca cccggccccc ggcagccacc tgctctatgc caagatgatc cagaagctag 1260  
ccgacctgcg cagccctaat gaggagactt ccaaggactt ccgctgcctc tccttccagc 1320  
ctgagtgccat catgaagctt acggcccttg tgctcgaatg gtttggcaat gagatctcct 1380  
ga 1382

<210> 4  
<211> 1534  
<212> DNA  
<213> Homo sapiens

<400> 4  
gttccttct tctgtcgaaa cgccattggca tggagtggag gaataagaaa aggagcgatt 60  
ggctgtcgat ggtgctcaga actgctggag tggagggat ggaggcaatg gcggccagca 120  
cttccctgcc tgaccctgga gactttgacc ggaacgtgcc ccggatctgt ggggtgtgt 180  
gagaccgagc cactggctt cacttcaatg ctatgacactg tgaaggctgc aaaggcttct 240  
tcaggcgaag cccctccca ggctctcccc agtggaaagg gaggagaag aagcaagggt 300  
tttccatgaa gggagccctt gcattttca catctccctc cttacaatgt ccatggaaaca 360  
tgcggcgctt acagccacag gaggcaggagg gtcttggcga agcatgaagc ggaaggcact 420  
attcacctgc cccttcaacg gggactggcc catcaccaag gacaaccgc gccactgc 480  
ggcctggccg ctcaaaccgt gtgtggacat cggcatgtat aaggagtta tttgtacaga 540  
ttagggaaatg cagaggaagc gggagatgt cctgaaggcgg aaggaggagg aggcccttggaa 600  
ggacagtctg cggcccaagc tggcttggagg gcagcagcgc atcatttcca tactgctgg 660  
cgccccaccat aagacactacg accccaccata ctccgacttc tgccagttcc ggcctccagt 720  
tcgtgtgaat gatgggtggag ggagccatcc ttccaggccc aactccagac acactccctt 780  
cttctctggg gactcccttcc cctccctgtcc agatcactgt atcacccttt cagacatgat 840  
ggactcgcttcc agcttcttca atctggatct gaggtaagaa gattcagatg acccttctgt 900  
gacccttagag ctgtcccagc tctccatgtt gcccacactg gctgacactgg tcagttacag 960  
catccaaaat gtcattggct ttgcttaatg gataccagga ttcaagatc tcacctctga 1020  
ggaccagatc gtactgtca agtcaatgtc cattgaggcc atcatgttgc gctccaatg 1080  
gtcccttaccat atggacgaca tggcttggac ctgtggcaac caagactaca agtaccgcgt 1140  
cagtgcgtt accaaagccg gacacagccctt ggagctgatt gagccctca tcaagttcca 1200

ggtgggactg aagaagctga acttgcata ggaggagcat gtcctgctca tggccatctg 1260  
catcgctcc ccagatgtc ctggggtgca ggacgcccgc ctgattgagg ccatccagga 1320  
ccgcctgtcc aacacactgc agacgtacat ccgcgtccgc caccggcccc cgggcagcca 1380  
cctgctctat gccaagatga tccagaagct agccgacctg cgcaagctca atgaggagca 1440  
ctccaagcag taccgctgcc tctccttcca gcctgagtgca agcatgaagc taacgccccct 1500  
tgtgctcgaa gtgttggca atgagatctc ctga 1534

<210> 5  
<211> 207  
<212> DNA  
<213> Homo sapiens

<400> 5  
tgcgaccttgcgggtgagcc tggggacagg ggtgaggcca gagacggacg gacgcagggg 60  
cccgcccaa ggcgaggagg aacagcgcctaaggcaga aaggaagagg gcggtgtgtt 120  
cacccgcagc ccaatccatc actcagcaac tcctagacgc tgtagaaag ttccctcgag 180  
gagcgtccca tccagtcgtc cgtcag 207

<210> 6  
<211> 157  
<212> DNA  
<213> Homo sapiens

<400> 6  
aggcagcatg aaacagtggg atgtgcagag agaagatctg gttccagtag ctctgacact 60  
cctcagctgt agaaaaccttgc acaactctgc acatcagttg tacaatggaa cggtattttt 120  
tactcttcat gtctgaaaag gctatgataa agatcaa 157

<210> 7  
<211> 1574  
<212> DNA  
<213> Homo sapiens

<400> 7  
tgcgaccttgcgggtgagcc tggggacagg ggtgaggcca gagacggacg gacgcagggg 60  
cccgcccaa ggcgaggagg aacagcgcctaaggcaga aaggaagagg gcggtgtgtt 120  
cacccgcagc ccaatccatc actcagcaac tcctagacgc tgtagaaag ttccctcgag 180  
gagcgtccca tccagtcgtc cgtcag 240  
acagaagagc accctggc tccacttacc tgcccccgc tccttcagg 300  
tggcggccag cacttccctg cctgaccctg gagactttga ccggaaatgc ccccgatct 360  
gtggggtgtg tggagaccga gccactgct ttcaacttcaa tgctatgacc tggtaaggct 420  
gcaaaggctt cttcaggcga agcatgaagc ggaaggactt attcacctgc cccttcaacg 480  
gggactgccc catcaccaag gacaaccgc gccactgcca ggcctccgg ctcaaacgct 540  
gtgtggacat cggcatgtt aaggagtta ttctgacaga tgaggaatg cagaggaagc 600  
gggagatgt cctgaagcgg aaggaggagg aggcttga ggcactgtc cggcccaagc 660  
tgtctgagga gcagcagcgc atcattgca tactgttggc cgcacccat aagacctacg 720  
accccaccc ctccgacttc tgccagttcc ggcctccagt tcgtgtgaat gatgggtggag 780  
ggagccatcc ttccaggccc aactcccgac acatcccgat ttctctggg gactcctcct 840  
cctcctgctc agatcactgt atcaccctt cagacatgtt ggactcgtcc agttctcca 900  
atctggatct gatgttggaa gattcagatg acccttctgt gacccttagag ctgtcccagc 960  
tctccatgt gccccacctg gctgacctgg tcagttacag catccaaag gtcattggct 1020  
ttgtctaaat gataccagga ttccagagacc tcacctctga ggaccagatc gtactgctga 1080  
atgtcaagtgc cattgagggtc atcatgttgc gctccaatga gtccttccacc atggacgaca 1140  
tgtcctggac ctgtggcaac caagactaca agtaccgcgt cagtgcgtc accaaagccg 1200  
gacacagcct ggagctgatt gagccctca tcaagttcca ggtgggactg aagaagctga 1260  
acttgcata ggaggaggcat gtcctgctca tggccatctg catcgctcc ccagatcg 1320  
ctggggtgca ggacgcccgc ctgattgagg ccatccagga ccgcctgtcc aacacactgc 1380  
agacgtacat ccgctgcccgc caccggcccc cggcagcca cctgctctat gccaagatga 1440  
tccagaagct agccgacctg cgccagctca atgaggagca ctccaagcag taccgctgcc 1500  
tctccttcca gcctgagtgca agcatgaagc taacgccccct tggctcgaa gtgtttggca 1560

atgagatctc ctga

1574

<210> 8  
<211> 122  
<212> DNA  
<213> Homo sapiens

<400> 8  
ggctcctgaa cctagccag ctggacggag aaatggactc tagcctcctc tgatagcctc 60  
atgccaggcc ccgtgcacat tgcttgctt gcctccctca atcctcatag cttctttg 120  
gg 122

<210> 9  
<211> 477  
<212> PRT  
<213> Homo sapiens

<400> 9  
Met Glu Trp Arg Asn Lys Lys Arg Ser Asp Trp Leu Ser Met Val Leu  
1 5 10 15  
Arg Thr Ala Gly Val Glu Glu Ala Phe Gly Ser Glu Val Ser Val Arg  
20 25 30  
Pro His Arg Arg Ala Pro Leu Gly Ser Thr Tyr Leu Pro Pro Ala Pro  
35 40 45  
Ser Gly Met Glu Ala Met Ala Ala Ser Thr Ser Leu Pro Asp Pro Gly  
50 55 60  
Asp Phe Asp Arg Asn Val Pro Arg Ile Cys Gly Val Cys Gly Asp Arg  
65 70 75 80  
Ala Thr Gly Phe His Phe Asn Ala Met Thr Cys Glu Gly Cys Lys Gly  
85 90 95  
Phe Phe Arg Arg Ser Met Lys Arg Lys Ala Leu Phe Thr Cys Pro Phe  
100 105 110  
Asn Gly Asp Cys Arg Ile Thr Lys Asp Asn Arg Arg His Cys Gln Ala  
115 120 125  
Cys Arg Leu Lys Arg Cys Val Asp Ile Gly Met Met Lys Glu Phe Ile  
130 135 140  
Leu Thr Asp Glu Glu Val Gln Arg Lys Arg Glu Met Ile Leu Lys Arg  
145 150 155 160  
Lys Glu Glu Glu Ala Leu Lys Asp Ser Leu Arg Pro Lys Leu Ser Glu  
165 170 175  
Glu Gln Gln Arg Ile Ile Ala Ile Leu Leu Asp Ala His His Lys Thr  
180 185 190  
Tyr Asp Pro Thr Tyr Ser Asp Phe Cys Gln Phe Arg Pro Pro Val Arg  
195 200 205  
Val Asn Asp Gly Gly Ser His Pro Ser Arg Pro Asn Ser Arg His  
210 215 220

Thr Pro Ser Phe Ser Gly Asp Ser Ser Ser Cys Ser Asp His Cys  
 225 230 235 240  
 Ile Thr Ser Ser Asp Met Met Asp Ser Ser Ser Phe Ser Asn Leu Asp  
 245 250 255  
 Leu Ser Glu Glu Asp Ser Asp Asp Pro Ser Val Thr Leu Glu Leu Ser  
 260 265 270  
 Gln Leu Ser Met Leu Pro His Leu Ala Asp Leu Val Ser Tyr Ser Ile  
 275 280 285  
 Gln Lys Val Ile Gly Phe Ala Lys Met Ile Pro Gly Phe Arg Asp Leu  
 290 295 300  
 Thr Ser Glu Asp Gln Ile Val Leu Leu Lys Ser Ser Ala Ile Glu Val  
 305 310 315 320  
 Ile Met Leu Arg Ser Asn Glu Ser Phe Thr Met Asp Asp Met Ser Trp  
 325 330 335  
 Thr Cys Gly Asn Gln Asp Tyr Lys Tyr Arg Val Ser Asp Val Thr Lys  
 340 345 350  
 Ala Gly His Ser Leu Glu Leu Ile Glu Pro Leu Ile Lys Phe Gln Val  
 355 360 365  
 Gly Leu Lys Lys Leu Asn Leu His Glu Glu Glu His Val Leu Leu Met  
 370 375 380  
 Ala Ile Cys Ile Val Ser Pro Asp Arg Pro Gly Val Gln Asp Ala Ala  
 385 390 395 400  
 Leu Ile Glu Ala Ile Gln Asp Arg Leu Ser Asn Thr Leu Gln Thr Tyr  
 405 410 415  
 Ile Arg Cys Arg His Pro Pro Gly Ser His Leu Leu Tyr Ala Lys  
 420 425 430  
 Met Ile Gln Lys Leu Ala Asp Leu Arg Ser Leu Asn Glu Glu His Ser  
 435 440 445  
 Lys Gln Tyr Arg Cys Leu Ser Phe Gln Pro Glu Cys Ser Met Lys Leu  
 450 455 460  
 Thr Pro Leu Val Leu Glu Val Phe Gly Asn Glu Ile Ser  
 465 470 475

<210> 10  
 <211> 434  
 <212> PRT  
 <213> Homo sapiens

<400> 10 15  
 Met Glu Trp Arg Asn Lys Lys Arg Ser Asp Trp Leu Ser Met Val Leu  
 5 10  
 1  
 Arg Thr Ala Gly Val Glu Gly Met Glu Ala Met Ala Ala Ser Thr Ser  
 20 25 30

Val Cys Gly Asp Arg Ala Thr Gly Phe His Phe Asn Ala Met Thr Cys  
35 40 45

Glu Gly Cys Lys Gly Phe Phe Arg Arg Ser Met Lys Arg Lys Ala Leu  
50 55 60

Phe Thr Cys Pro Phe Asn Gly Asp Cys Arg Ile Thr Lys Asp Asn Arg  
65 70 75 80

Arg His Cys Gln Ala Cys Arg Leu Lys Arg Cys Val Asp Ile Gly Met  
85 90 95

Met Lys Glu Phe Ile Leu Thr Asp Glu Glu Val Gln Arg Lys Arg Glu  
100 105 110

Met Ile Leu Lys Arg Lys Glu Glu Ala Leu Lys Asp Ser Leu Arg  
115 120 125

Pro Lys Leu Ser Glu Glu Gln Gln Arg Ile Ile Ala Ile Leu Leu Asp  
130 135 140

Ala His His Lys Thr Tyr Asp Pro Thr Tyr Ser Asp Phe Cys Gln Phe  
145 150 155 160

Arg Pro Pro Val Arg Val Asn Asp Gly Gly Ser His Pro Ser Arg  
165 170 175

Pro Asn Ser Arg His Thr Pro Ser Phe Ser Gly Asp Ser Ser Ser Ser  
180 185 190

Cys Ser Asp His Cys Ile Thr Ser Ser Asp Met Met Asp Ser Ser Ser  
195 200 205

Phe Ser Asn Leu Asp Leu Ser Glu Glu Asp Ser Asp Asp Pro Ser Val  
210 215 220

Thr Leu Glu Leu Ser Gln Leu Ser Met Leu Pro His Leu Ala Asp Leu  
225 230 235 240

Val Ser Tyr Ser Ile Gln Lys Val Ile Gly Phe Ala Lys Met Ile Pro  
245 250 255

Gly Phe Arg Asp Leu Thr Ser Glu Asp Gln Ile Val Leu Leu Lys Ser  
260 265 270

Ser Ala Ile Glu Val Ile Met Leu Arg Ser Asn Glu Ser Phe Thr Met  
275 280 285

Asp Asp Met Ser Trp Thr Cys Gly Asn Gln Asp Tyr Lys Tyr Arg Val  
290 295 300

Ser Asp Val Thr Lys Ala Gly His Ser Leu Glu Leu Ile Glu Pro Leu  
305 310 315 320

Ile Lys Phe Gln Val Gly Leu Lys Lys Leu Asn Leu His Glu Glu Glu  
325 330 335

His Val Leu Leu Met Ala Ile Cys Ile Val Ser Pro Asp Arg Pro Gly  
340 345 350

Val Gln Asp Ala Ala Leu Ile Glu Ala Ile Gln Asp Arg Leu Ser Asn  
355 360 365

Thr Leu Gln Thr Tyr Ile Arg Cys Arg His Pro Pro Pro Gly Ser His  
 370 375 380  
 Leu Leu Tyr Ala Lys Met Ile Gln Lys Leu Ala Asp Leu Arg Ser Leu  
 385 390 395 400  
 Asn Glu Glu His Ser Lys Gln Tyr Arg Cys Leu Ser Phe Gln Pro Glu  
 405 410 415  
 Cys Ser Met Lys Leu Thr Pro Leu Val Leu Glu Val Phe Gly Asn Glu  
 420 425 430  
 Ile Ser

<210> 11  
 <211> 72  
 <212> PRT  
 <213> Homo sapiens

<400> 11 15  
 Met Glu Trp Arg Asn Lys Lys Arg Ser Asp Trp Leu Ser Met Val Leu  
 1 5 10  
 Arg Thr Ala Gly Val Glu Gly Met Glu Ala Met Ala Ala Ser Thr Ser  
 20 25 30  
 Leu Pro Asp Pro Gly Asp Phe Asp Arg Asn Val Pro Arg Ile Cys Gly  
 35 40 45  
 Val Cys Gly Asp Arg Ala Thr Gly Phe His Phe Asn Ala Met Thr Cys  
 50 55 60  
 Glu Gly Cys Lys Gly Phe Phe Arg  
 65 70

<210> 12  
 <211> 427  
 <212> PRT  
 <213> Homo sapiens

<400> 12 15  
 Met Glu Ala Met Ala Ala Ser Thr Ser Leu Pro Asp Pro Gly Asp Phe  
 1 5 10  
 Asp Arg Asn Val Pro Arg Ile Cys Gly Val Cys Gly Asp Arg Ala Thr  
 20 25 30  
 Gly Phe His Phe Asn Ala Met Thr Cys Glu Gly Cys Lys Gly Phe Phe  
 35 40 45  
 Arg Arg Ser Met Lys Arg Lys Ala Leu Phe Thr Cys Pro Phe Asn Gly  
 50 55 60  
 Asp Cys Arg Ile Thr Lys Asp Asn Arg Arg His Cys Gln Ala Cys Arg  
 65 70 75 80  
 Leu Lys Arg Cys Val Asp Ile Gly Met Met Lys Glu Phe Ile Leu Thr  
 85 90 95

Asp Glu Glu Val Gln Arg Lys Arg Glu Met Ile Leu Lys Arg Lys Glu  
100 105 110

Glu Glu Ala Leu Lys Asp Ser Leu Arg Pro Lys Leu Ser Glu Glu Gln  
115 120 125

Gln Arg Ile Ile Ala Ile Leu Leu Asp Ala His His Lys Thr Tyr Asp  
130 135 140

Pro Thr Tyr Ser Asp Phe Cys Gln Phe Arg Pro Pro Val Arg Val Asn  
145 150 155 160

Asp Gly Gly Ser His Pro Ser Arg Pro Asn Ser Arg His Thr Pro  
165 170 175

Ser Phe Ser Gly Asp Ser Ser Ser Cys Ser Asp His Cys Ile Thr  
180 185 190

Ser Ser Asp Met Met Asp Ser Ser Ser Phe Ser Asn Leu Asp Leu Ser  
195 200 205

Glu Glu Asp Ser Asp Asp Pro Ser Val Thr Leu Glu Leu Ser Gln Leu  
210 215 220

Ser Met Leu Pro His Leu Ala Asp Leu Val Ser Tyr Ser Ile Gln Lys  
225 230 235 240

Val Ile Gly Phe Ala Lys Met Ile Pro Gly Phe Arg Asp Leu Thr Ser  
245 250 255

Glu Asp Gln Ile Val Leu Leu Lys Ser Ser Ala Ile Glu Val Ile Met  
260 265 270

Leu Arg Ser Asn Glu Ser Phe Thr Met Asp Asp Met Ser Trp Thr Cys  
275 280 285

Gly Asn Gln Asp Tyr Lys Tyr Arg Val Ser Asp Val Thr Lys Ala Gly  
290 295 300

His Ser Leu Glu Leu Ile Glu Pro Leu Ile Lys Phe Gln Val Gly Leu  
305 310 315 320

Lys Lys Leu Asn Leu His Glu Glu Glu His Val Leu Leu Met Ala Ile  
325 330 335

Cys Ile Val Ser Pro Asp Arg Pro Gly Val Gln Asp Ala Ala Leu Ile  
340 345 350

Glu Ala Ile Gln Asp Arg Leu Ser Asn Thr Leu Gln Thr Tyr Ile Arg  
355 360 365

Cys Arg His Pro Pro Pro Gly Ser His Leu Leu Tyr Ala Lys Met Ile  
370 375 380

Gln Lys Leu Ala Asp Leu Arg Ser Leu Asn Glu Glu His Ser Lys Gln  
385 390 395 400

Tyr Arg Cys Leu Ser Phe Gln Pro Glu Cys Ser Met Lys Leu Thr Pro  
405 410 415

Leu Val Leu Glu Val Phe Gly Asn Glu Ile Ser  
420 425

<210> 13  
<211> 22  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)..(22)  
<223> Forward Primer for R T-PCR for exon 1d

<400> 13  
ggctgtcgat ggtgctcaga ac 22

<210> 14  
<211> 22  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)..(22)  
<223> Forward Primer for RT-PCR for exon 1f

<400> 14  
aagttcctcc gaggagcctg c 22